

REMARKS

Applicants respectfully request reconsideration of the present application in view of the foregoing amendments and the reasons that follow.

A detailed listing of all claims that are, or were, in the application, irrespective of whether the claim remains under examination in the application, is presented, with an appropriate status identifier.

Claims 11 and 13 are currently being amended. Claim 11 is being amended to correct a typographical error and to improve the clarity of the claim. Claim 13 is being amended to correct a typographical error. The amendments to claims 11 and 13 do not necessarily narrow their scope.

Claims 1-34 are pending in this application.

Allowable subject matter

Applicants appreciate the indication that claims 27-34 are allowed, and that claims 2-12, 19, and 25-26 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicants have not amended claims 2-12, 19, and 25-26 to be independent form at this time, however, because applicants believe that independent claim 1, from which these claims ultimately depend, is allowable.

Rejections under 35 U.S.C. §§ 102 and 103

Claims 1, 15, 16, and 18 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,575,179 to Lee et al. (hereafter “Lee”). Claims 13, 14, and 17 were rejected under 35 U.S.C. § 103 as being unpatentable over Lee. Claims 20-24 were rejected under 35 U.S.C. § 103 as being unpatentable over Lee in view of U.S. Patent No. 6,330,102 to Daneman et al. (hereafter “Daneman”). Applicants respectfully traverse these rejections for at least the following reasons.

Independent claim 1 recites an optical device that includes, among other things, “a beam distribution element to receive the input optical signal and distribute it into a plurality of beams” and “a variable path length element to receive the plurality of beams from the

beam distribution element, wherein the variable path length element comprises a plurality of path sections, wherein a length of at least one of said path sections is variable.” Lee fails to disclose or suggest such an optical device.

For example, the Lee device does not include “a beam distribution element to receive the input optical signal and distribute it into a plurality of beams,” as recited in claim 1. The Office Action appears to equate the prism 40 of Lee with the beam distribution element of claim 1. The prism 40 of Lee, however, does not distribute the beam 38 into a plurality of beams, but merely couples the beam 38 into the thin film 14 as a single guided wave 39 (see Fig. 1, col. 4, lines 16-25; col. 5, lines 11-16). While Lee discloses “[t]he YIG material used to form the thin-film layer 14 is capable of supporting may different optical propagation modes” (col. 4, lines 20-22), Lee discloses that only a lower order mode is excited (col. 4, lines 22-25), and as can be seen in Figure 1, only a single guided wave 39 is produced. Thus, Lee fails to teach the optical device of claim 1.

As a further example, the Lee device does not include “a variable path length element to receive the plurality of beams from the beam distribution element, wherein the variable path length element comprises a plurality of path sections, wherein a length of at least one of said path sections is variable,” as recited in claim 1. This feature of claim 1 appears to be entirely missing from the Lee device. If the Examiner maintains this rejection, applicants respectfully request that the Examiner point out where Lee discloses a variable path length element, and to specifically point out where Lee discloses a plurality of path sections, as recited in claim 1.

Daneman fails to cure the deficiencies of Lee. Daneman allegedly discloses switching elements with rotating mirrors capable of controlling the intensity of light. Daneman, however, fails to disclose “a beam distribution element to receive the input optical signal and distribute it into a plurality of beams” and “a variable path length element to receive the plurality of beams from the beam distribution element, wherein the variable path length element comprises a plurality of path sections, wherein a length of at least one of said path sections is variable.” Thus, even if Daneman were combined with Lee, the combination would not satisfy all of the limitations of claim 1.

For at least the above reasons, applicants submit that independent claim 1 is patentable over Lee alone and over the proposed combination of Lee and Daneman.

Dependent claims 13-18 and 20-24 are allowable for at least the same reasons as claim 1. Moreover, those claims recite additional features that further distinguish the claimed invention from Lee and Daneman. For example, claim 20 recites “wherein the variable path length element includes a plurality of switching elements, and wherein at least one of the switching elements controls an intensity of a light beam received by the beam interaction element.” The Office Action acknowledges that Lee does not disclose the features of claim 20, and relies on Daneman as disclosing these features. The Office Action, however, states no reason why one skilled in the art would have been motivated to modify Lee to include the alleged switching elements of Daneman. Instead, the Office Action merely concludes that “[i]t would have been obvious to having [sic] ordinary skill in the art at the time the invention was made to use the rotating mirror and the and the [sic] two dimensional MEMS mirrors such as the one discloses [sic] in Daneman’s device for controlling the light path in Lee’s device.” As the Office has stated no motivation to combine Lee and Daneman, the rejection should be withdrawn.

Applicants submit that the present application is in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is believed that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If any extensions of time are needed for timely acceptance of papers submitted herewith, Applicants hereby petition for such extension under 37 C.F.R. §1.136 and authorizes payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

Date January 12, 2004

FOLEY & LARDNER

Customer Number: 22428

Telephone: (202) 672-5349

Facsimile: (202) 672-5399

By Thomas G. Bilodeau

Thomas G. Bilodeau

Attorney for Applicants

Registration No. 43,438